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Purdue Univ. Pharm.
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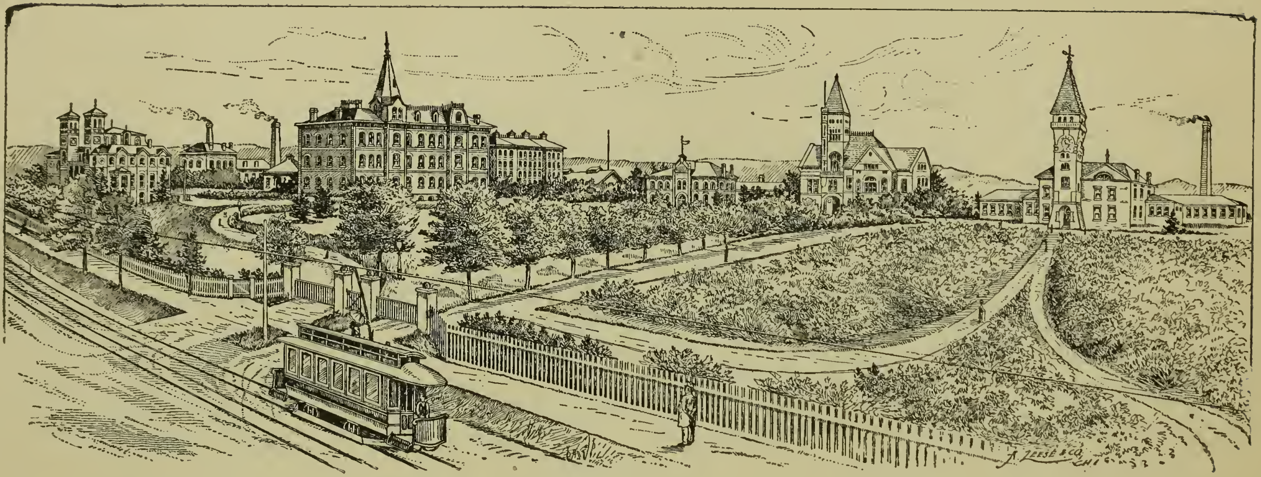
# SCHOOL OF PHARMACY,

## PURDUE UNIVERSITY,

## TENTH ANNUAL REGISTER,

LAFAYETTE, IND.

FEB 24 1917



PURDUE UNIVERSITY CAMPUS.

1. Art Hall.
2. Pharmacy Building.
3. Engine House.
4. University Hall.
5. Men's Dormitory.
6. Armory.
7. Science Hall.
8. Electrical Building.
9. Engineering Building.

# PURDUE UNIVERSITY.

## TENTH ANNUAL CATALOGUE

OF THE

# SCHOOL OF PHARMACY.

1893-94.

INDIANAPOLIS:
W. B. BURFORD, CONTRACTOR FOR STATE PRINTING AND BINDING.
1893.

# BOARD OF TRUSTEES.

| | |
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CHARLES B. STUART,
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# CALENDAR 1893-94.

September 26, 1893. Entrance Examination.
September 27, 1893. Lectures begin in School of Pharmacy.
December 20, 1893, to January 3, 1894. Christmas holidays.
April 3, 1894. State Examination.
April 10, 1894. Close of session in School of Pharmacy.

# FACULTY.

JAMES H. SMART, A. M., LL.D.,
*President of the University.*

ARTHUR L. GREEN, A. M., Ph. C.,
*Dean and Professor of Chemistry.*

STANLEY COULTER, Ph. D.,
*Professor of Botany.*

JULIUS W. STURMER, Ph. G.,
*Professor of Pharmacy.*

GEORGE SPITZER, Ph. G.,
*Lecturer on Operative Pharmacy.*

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*Instructor in Chemistry.*

BENJAMIN M. HOAK, Ph. G.,
*Instructor in Pharmacognosy.*

S. GRANT WRIGHT, B. S.,
*Instructor in Botany.*

# STATE EXAMINERS.

GEORGE ANDREWS, Muncie.
OTTO W. GROSS, Fort Wayne. JOHN KENNEDY, Vincennes.

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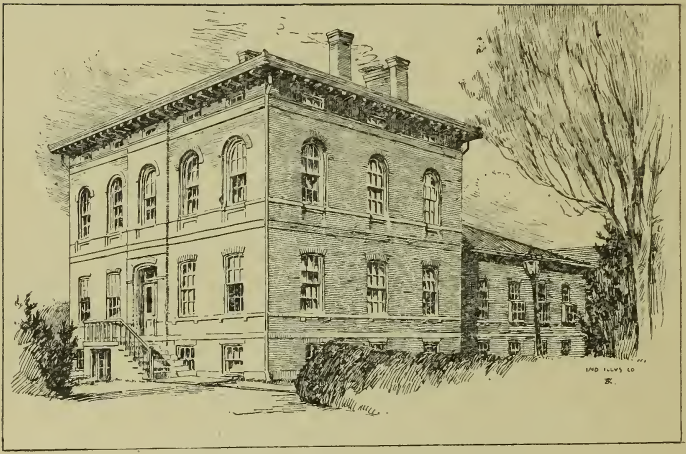
* After January 4, 1893, FRANK M. BEST, Ph. G.



PHARMACEUTICAL LABORATORY.

# GENERAL STATEMENT.

Purdue University is the State Institution of Technology. It is supported by legislative appropriations and by the proceeds of an endowment fund granted by the General Government. It derives its name through legislative enactment from John Purdue, who gave to the State for the use of the Institution one hundred and fifty thousand dollars. It has a permanent endowment fund to the amount of three hundred and forty thousand dollars, and other non-productive property in buildings, lands and equipment to the value of four hundred and forty thousand dollars, and an annual income from State appropriations and U. S. Government appropriations.

It has one hundred and eighty acres of land in its campus and farm, fifteen buildings, well-equipped laboratories, shops, museums, library and reading rooms.

The institution embraces six special schools, including a School of Pharmacy, which affords a thorough and practical training in pharmacy. It also offers excellent training for those who expect to engage in chemical pursuits, or to enter the laboratory of a manufacturing pharmacist or chemist. The instruction also constitutes a good preparatory course for those who anticipate attending a school of medicine.

The student is engaged at the University from 8:15 A. M. to 12:30, and from 1:30 to 5:30 P. M., for five days each week. About two-thirds of this time is devoted to laboratory work, and one-third to lectures and recitations. There are neither lectures, recitations nor quizzes in the evening; that time being allotted to home-study and preparation for the ensuing day's work. The student has, therefore, no time for clerking in a drug store, and must devote his undivided time and energy to his school work.

The instruction covers two school years of twenty-six weeks each. Special attention is called to the large amount of required laboratory work, and comparison solicited with other schools of pharmacy on this point.

## OUTLINE OF REQUIRED WORK.

| COURSE. | SUBJECTS. | No. of Hours in Lecture Room. | No. of Hours in Laboratory. |
|---|---|---|---|
| FIRST YEAR. | 1. Pharmacy | 52 | 208 |
| | 2. Inorganic Chemistry | 70 | 120 |
| | 3. Qualitative Analytical Chemistry (Inorganic) | 50 | 400 |
| | 4. Pharmacognosy | . . . | 26 |
| | 5. Physiology | 26 | . . . |
| | 6. Doses of Drugs and the Composition of their Preparations | 26 | . . . |
| | 7. Pharmaceutical Problems | 10 | . . . |
| | Total hours for the year | 234 | 754 |
| | Average per week | 38 | |
| SECOND YEAR. | 8. Organic Chemistry | 50 | 262 |
| | 9. Pharmacy | 50 | . . . |
| | 10. Qualitative Analytical Chemistry (Organic) | 15 | 60 |
| | 11. Quantitative Analytical Chemistry (Inorganic) | 12 | 120 |
| | 12. Quantitative Analytical Chemistry (Organic) | 15 | 120 |
| | 13. Analysis of Urine | 10 | 42 |
| | 14. Botany | 12 | 40 |
| | 15. Therapeutics | 26 | . . . |
| | 16. Pharmacognosy | . . . | 50 |
| | 17. Synonyms | 26 | . . . |
| | 18. Prescription Work | 26 | 104 |
| | Total hours for the year | 242 | 798 |
| | Average per week | 40 | |

# FIRST-YEAR COURSE.

## PHARMACY.

*Class Work—52 Hours.*

Lectures and recitations on systems of weight and measure, specific gravity and its practical utility; on heat, its generation, its measurement and its use in pharmacy. Also on the various processes and manipulations which find application in pharmaceutical practice; as, comminution, solution, filtration, evaporation, precipitation, crystalization, percolation, etc., etc. The working-formulas for the manufacture of pharmaceutical preparations will be given; the various methods will be criticised and the merits and demerits of each pointed out to the student. The subject will conclude with the study of the diverse classes of pharmaceutical preparations, viz.: medicated waters, syrups, tinctures, elixirs, infusions, decoctions, extracts, fluid extracts, abstracts, vinegars, glycerites, mucilages, mixtures, liniments, ointments, cerates, plasters, pills, troches, suppositories, and others.

*Laboratory Work—208 Hours.*

In the laboratory each student will make, independently, though under the personal supervision of the instructor, the following preparations:

Three medicated waters.
Two solutions.
Four syrups.
Five elixirs.
Four extracts.
One abstract.
One mass.
Two glycerites.

One infusion.
One decoction.
One vinegar.
Three tinctures.
Five fluid extracts.
Three soluble extracts.
Three spirits.
Two mucilages.
Two mixtures.
Two liniments.
One confection.
One honey.
Two powders.
One oleate.
Five ointments.
One cerate.
Three plasters.
Ten samples of pills.
Four samples of troches.
Five samples of suppositories.
Six emulsions.

This, like all the laboratory work in the course, is obligatory; but students who have had much experience and acquired special skill in manufacturing will be excused from part or all of the above and provided with advanced work.

## INORGANIC CHEMISTRY.

*Class Work—70 Hours.*

Lectures and recitations on inorganic chemicals, including source, manufacture, chemical reaction, use and general practical application. Attention is also given to impurities, pharmacopœial standards and tests.

Direction is given for laboratory work.

*Laboratory Work—120 Hours.*

In the laboratory each student, independently, prepares the following chemical compounds:

Sulphurated potassa.
Lead oxide.
Lead acetate.
Silver nitrate.
Green iodide of mercury.
Corrosive chloride of mercury.
Red oxide of mercury.
Bismuth subnitrate.
Copper sulphate.
Iron sulphate.
Oxide of zinc.
Precipitated sulphur.
Calcium phosphate, precipitated.
Magnesium citrate.
Sodium iodide.
Sodium acid sulphate.
Sodium bromide.
Aqua ammonia.
Nitric acid.
Syrup of hydriodic acid.

Iron sulphate, precipitated.
Dried alum.
Sulphate of aluminum.
Chromic acid.
Sulphate of manganese.
Chloride of zinc.
Calomel.
Solution of soda.
Solution of nitrate of iron.
Solution of subsulphate of iron.
Solution of tersulphate of iron.
Syrup of iodide of iron.
Fowler's solution.
Solution of subacetate of lead.
Calcium hypophosphite.

## QUALITATIVE ANALYTICAL CHEMISTRY (Inorganic.)

*Class Work—50 Hours.*

Students learn thoroughly the scientific names and chemical formulæ of the various inorganic compounds—hydrates, oxides, acids and salts. Rules are committed on precipitation and on solubility. These rules are of great value, not merely in analytical work, but also in prescription work, where they aid the student in the study of the incompatibilities of inorganic substances. The general process for the detection of acids and bases is committed by the student. He is also taught to write the equations for each chemical reaction.

*Laboratory Work—400 Hours.*

In the laboratory he verifies the rules on precipitation and solubility; he becomes thoroughly familiar with the chemical behavior of the various acids and bases; he repeatedly works through a scheme of separation and identification of the acids and bases; he then subjects twenty individual unknowns (mixtures of inorganic compounds) to a qualitative examination, and reports his results to the instructor.

## PHARMACOGNOSY.

*Laboratory Work—26 Hours.*

This subject will continue through both years. In the first year crude vegetable drugs, as they occur in the market, will be studied. The student will be taught to identify them by physical characteristics—appearance, taste and odor. He will also receive a thorough drill on their Latin and English names, with spelling and pronunciation. History and habitat will be given whenever of practical importance.

These studies will be pursued by the class in sections, so that each student can receive the benefit of individual instruction.

### PHYSIOLOGY.

*Class Work—26 Hours.*

The instruction in this subject comprises a description of the organs of the body, with a brief discussion of their functions, and the influences exerted on the same by external conditions. The principal object is to prepare the student for the study of therapeutics.

### DOSES OF DRUGS AND THE COMPOSITION OF THEIR PREPARATIONS.

*Class Work—26 Hours.*

This subject is considered of sufficient importance to warrant its separation from *Materia Medica*, in connection with which it is usually taught. A carefully prepared dose-table is given. In this table medicines are grouped in a manner which will enable the student to memorize them with comparative facility. The student is also drilled in the percentage composition of pharmacopœial preparations, as tinctures, spirits, solutions, pills, powders, etc. This knowledge is of great importance in prescription work.

### PHARMACEUTICAL PROBLEMS.

*Class Work—10 Hours.*

Calculations which find application in manufacturing, or in analytical work, will be taught.

# SECOND-YEAR COURSE.

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## ORGANIC CHEMISTRY.

*Class Work—50 Hours.*

Lectures and recitations on hydrocarbons, alcohols, ethers, ethereal salts, organic acids, carbohydrates, and other classes of organic compounds; on fermentation products, petroleum products, natural and artificial gas, aniline dyes, synthetically prepared new remedies, and other compounds that are of interest to the pharmacist. The student will study the molecular structure of organic compounds, and will learn to write their structural formulae. He will also study their manufacture, their impurities, and their uses. In conclusion, he will be instructed in the methods of synthesis—those methods in accordance with which the complex organic molecules are built up,—and will receive direction for laboratory work.

*Laboratory Work—262 Hours.*

In the laboratory each student will make the following organic compounds:

Alcohol.
Ether.
Ethyl iodide.
Ethyl nitrite (and spirit of nitrous ether).
Amyl acetate.
Chloroform.
Iodoform.
Acetone.
Acetaldehyde.
Oxalic acid.
Acetamid.
Glycerine.
Nitrobenzene.
Aniline.
Acetanilid.
Potassium benzene-sulphonate.
Phenol.
Benzoic acid (natural).
Benzoic acid (artificial).
Oil wintergreen (artificial).
Scale Salts.
  Citrate of iron.
  Tartrate of iron and potassium.
  Phosphate of iron.
  Citrate of iron and quinine.

## PHARMACY.

*Class Work—50 Hours.*

Lectures and recitations on plant-constituents, viz.: starches, sugars, gums, resins, fixed oils, volatile oils, oleo-resins, gum-resins, balsams, organic acids, glucosides, alkaloids, etc; their source, chemical composition, solubility and use.

The crude organic drugs will next be taken up, classified according to their principal constituents, and studied in the following order: Drugs containing—(1) starches and gums, (2) sugars, (3) fixed oils, (4) volatile oils, (5) resins, (6) gum-resins, oleo-resins and balsams, (7) organic acids, (8) tannins, (9) glucosides and neutral principles, (10) alkaloids. The student will learn their source, principal constituents, and what menstruum should be employed in their extraction. In conclusion pharmacopœial and important non-pharmacopœial preparations will be studied.

See also prescription work.

## QUALITATIVE ANALYTICAL CHEMISTRY (Organic).

*Class and Laboratory Work—75 Hours.*

The student is taught the separation and identification of the more common organic compounds; as, benzene, alcohol, chloroform, glycerine, glucose, sucrose, chloral hydrate, tannic, gallic, tartaric, benzoic and salicylic acids, quinine, strychnine, morphine, caffeine and many others.

The subject of *Toxicology* is also classed under this head. Instruction in the use of antidotes, in cases of poisoning, is here given.

Laboratory work consists in the detection of the more common organic and inorganic poisons in presence of other organic material.

As Inorganic Qualitative Analytical Chemistry aids the student in the study of the incompatibilities of inorganic substances, so Organic Analytical Chemistry aids the student in the study of the incompatibilities of organic substances. The utility of this subject to the pharmacist is therefore obvious.

## QUANTITATIVE ANALYTICAL CHEMISTRY (Inorganic).

*Class and Laboratory Work—132 Hours.*

The preparation of standard volumetric solutions, and their use in the estimation of acids, alkalies, iodine, iron, silver, chlorides, etc. Gravimetric determinations are also made of iron, aluminum, calcium, magnesium, sulphuric acid, hydrochloric acid, phosphoric acid, etc.

The pharmacopœial tests are applied to chemicals and the per cent. of impurities ascertained.

## QUANTITATIVE ANALYTICAL CHEMISTRY (Organic).

*Class and Laboratory Work—135 Hours.*

(a). *Pharmaceutical Assaying.*—This consists in the quantitative estimation of the active constituents in crude drugs and pharmacopœial preparations. The student will estimate the active constituents of the following: Cinchona, opium, nux vomica, aconite, belladonna, guarana, ipecac, podophyllum, spirit of nitrous ether, three fluid extracts, one pill mass, one scale salt. He will also determine the amount of alcohol and glycerine in galenical preparations. The work, as arranged, familiarizes the student with the various standard methods of assaying.

(b). *Food Analysis.*—The analysis of butter, milk, vinegar, baking powder, etc.

To be competent to do analytical work of this character is of great import to the pharmacist of to-day;

but this competency is not the only gain derived from this work: the student also acquires that care and precision which is of inestimable value to the prescriptionist.

## ANALYSIS OF URINE.

*Class Work—10 Hours.*

Lectures and recitations on the composition of urine; on abnormal constituents and their pathological indications.

*Laboratory Work—42 Hours.*

This consists in the chemical and microscopical examination of normal and abnormal urine. The student is furnished with natural (not artificial) samples, obtained through resident physicians.

## BOTANY.

*Class Work—12 Hours.*

(*a*.) General Lectures — Treating of the embryo, germination, with its conditions and phenomena, structure and functions of the parts of the plant body, assimilation, respiration, growth, irritability, movements and fertilization.

(*b*.) Special Lectures—Ordinary adulterants of drugs, with microscopical methods for detection of adulterations.

*Laboratory Work—40 Hours.*

(*a*.) A careful study of the compound microscope and its appliances, together with practice in mounting, sectioning, etc.

(*b*.) A study of the various tissues and tissue elements, together with practice in the application of the facts thus obtained in the *detection of adulterations in drugs*.

(*c*.) A study of the gross anatomy of typical plants and their organs.

## THERAPEUTICS.

*Class Work—26 Hours.*

Medicines are classified according to their therapeutical uses. The different classes are defined and arranged in a manner which will facilitate their study. The more important drugs, like opium, cinchona, belladonna, etc., etc., will be taken up separately and their physiological action and therapeutical use more fully studied.

Lectures will be given on poisons and antidotes.

## PHARMACOGNOSY.

*Laboratory Work—50 Hours.*

Students learn to identify on inspection crude, granulated and powdered organic drugs, inorganic and organic chemicals, and pharmaceutical preparations.

## SYNONYMS.

*Class Work—26 Hours.*

Recitations on the Latin and English names of drugs, chemicals and pharmaceutical preparations.

## PRESCRIPTION WORK.

*Class Work—26 Hours.*

Lectures and recitations on the prescription, and on incompatibilities. Also a drill in Latin, with reading, interpreting and correcting of Latin prescriptions.

Special attention is paid throughout the year to doses, solubility of chemicals, and to the composition of pharmaceutical preparations.

*Laboratory Work—104 Hours.*

In the dispensing laboratory students experiment with incompatible mixtures, thereby becoming familiar with the difficulties commonly met with at the prescription counter, and learning how best to overcome them. They fill numerous prescriptions taken from the files of drug stores, besides many typical ones furnished by the instructor.

The acquisition of manipulative skill—skill in measuring, weighing, powder-folding, pill-rolling, capsule-filling, etc.—constitutes a prominent feature of this work.

Before entering upon prescription work, students are required to pass a review examination on doses of drugs and the percentage composition of their preparations. This examination will be held at the beginning of the second year.

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The frequency with which examinations and quizzes are conducted in each subject by the instructor in charge, constitutes a characteristic of the courses; thus rendering special quiz-classes superfluous.

During laboratory hours the instructors are in constant attendance, to direct the student in his work whenever necessary.

In the laboratory only one student is assigned to each table.

## REQUIREMENTS FOR ADMISSION.

Candidates for admission must have a good knowledge of the common English branches. In arithmetic special familiarity with denominate numbers, fractions, percentage and proportion will be required. Examination for applicants will be held Tuesday, September 26, at 9 A. M.

Those presenting satisfactory certificates of proficiency are exempt from entrance examinations. No experience in a drug store is required for entrance.

Women are admitted on the same conditions as men.

No one will be allowed to enter the School of Pharmacy from the other Schools of Purdue University without special permission.

## STATE EXAMINATION.

This examination is conducted by the Committee on Education of the Indiana Pharmaceutical Association, and will be held April 3, 1894.

## GRADUATION.

The degree of Graduate in Pharmacy (Ph. G.) will be conferred upon each student who successfully completes the required course, and passes the State Examination.

## EXPENSES.

The expenses are far less than in the majority of similar schools, while unusual facilities are afforded for laboratory practice. The year is divided into two terms; the first commences September 27, 1893, and the second January 4, 1894.

The fees are as follows, payable in advance:

### FIRST TERM.

| | |
|---|---|
| Entrance fee | $5 00 |
| Incidentals | 5 00 |
| Chemicals | 12 00 |

### SECOND TERM.

| | |
|---|---|
| Incidentals | $5 00 |
| Chemicals | 12 00 |

No extra fees are required of students who come from other States.

There will also be charges for breakage, and for such chemicals as may be required in unusual quantities. To cover such expenses, a laboratory deposit of $15.00 is required at the time of admission. From $8.00 to $10.00 of this deposit is usually returned to the student at the end of the year.

Good board may be had for $2.75 a week, and by clubbing together students can reduce board to about $2.00 or $2.25. Furnished rooms can be had for about 75 cents per week.

The total expense of board, room rent, fuel, fees, books and washing for twenty-six weeks need not exceed $150. Students of the School of Pharmacy must provide their own rooms, as they can not be accommodated in the college dormitory.

A fee of $5.00 will be required for the diploma, and should be paid before commencement week.

Letters of inquiry may be addressed to

ARTHUR L. GREEN,
*Dean of Purdue School of Pharmacy,*
LaFayette, Ind.

## TEXT BOOKS.

All text books, with the exception of perhaps the United States Dispensatory, can best be purchased after arrival.

# STUDENTS 1892-93.

## SECOND-YEAR STUDENTS.

| | |
|---|---|
| George W. Bates, | *Palmyra, Mo.* |
| James Braden, | *Joppa, Mich.* |
| Joseph E. Carson, | *Badger.* |
| John C. Clark, | *Carthage.* |
| Rowland E. Clark, | *Carthage.* |
| Joseph L. Cramer, | *Oxford, Ohio.* |
| Maynard M. Erb, | *Bentley.* |
| Jacob R. Francis, | *Edinburgh.* |
| Walter L. Gerhart, | *La Fayette.* |
| Walter E. Hardman, | *North Manchester.* |
| Isaac M. Henderson, | *Sharpsville.* |
| Gus Hess, | *Connersville.* |
| Charles L. Hoffman, | *West LaFayette.* |
| Justus C. Houser, | *California, Mo.* |
| William F. Kirkhoff, | *LaFayette.* |
| Jacob A. Long, | *Bluffton.* |
| Miss Myrtle L. McMahan, | *LaFayette.* |
| Loren B. Miller, | *Indianapolis.* |
| Henry H. Neal, | *Thorntown.* |
| John H. Rockwood, | *Goodland.* |
| James H. Wellington, | *Kentland.* |
| Wood Wiles, | *Shelbyville.* |
| Leonard D. Worden, | *Albion.* |

Total, 23.

## FIRST-YEAR STUDENTS.

| | |
|---|---|
| Christian H. Albersmeyer, | *Fort Wayne.* |
| Charles E. Anderson, | *Hull, Iowa.* |
| William N. Arnett, | *Fortville.* |
| Frank R. Bass, | *Mooresville.* |
| Henry L. Beerman, | *Indianapolis.* |
| Harry T. S. Best, | *Brookville.* |

| | |
|---|---|
| Dally Bland, | *Worthington.* |
| Frank J. Boatman. | *Indianapolis.* |
| Harvey A. Burkee, | *South Bend.* |
| Alexander M. Carter, | *Herriman, Tenn.* |
| George A. Clapesattle, | *Fort Wayne.* |
| Harry R. Crillman, | *Indianapolis.* |
| George C. Cullom, | *Frankfort.* |
| George C. Davidson, | *Union.* |
| Edwin C. Downey, | *Rochester.* |
| Oliver E. Dunn; | *Milwaukee, Wis.* |
| Carlos C. Earl, | *Sackett's Harbor, New York.* |
| Charles Fall, | *Wabash.* |
| Arthur Fenton, | *Lebanon.* |
| Frederick H. Flaugher, | *New Richmond.* |
| Miss Mabel E. Fleming, | *Princeton.* |
| Willis H. Fox, | *Three Rivers, Mich.* |
| Otto F. Grahl, | *Fort Wayne.* |
| Norris H. Harding, | *Osgood.* |
| Charles E. Hawley, | *Huntington.* |
| Leonidas C. Hinchman, | *Rushville.* |
| Harry C. James, | *LaFayette.* |
| James M. Johnson, | *Decatur.* |
| Clarence E. Ketring, | *Syracuse.* |
| George M. Kimble, | *Brookville.* |
| John H. Kneal, | *Montmorenci.* |
| Corydon M. Knowlton, | *Sackett's Harbor, New York.* |
| Charles O. Maple, | *Indianapolis.* |
| Amos M. Marsh, | *Sackett's Harbor, New York.* |
| Thomas P. Marshall, | *Butler, Georgia.* |
| Henry F. Massey, | *New Carlisle.* |
| Martin J. Mauch, | *LaFayette.* |
| Henry M. Mehlig, | *Tipton.* |
| Frank Meitzler, | *Columbia City.* |
| Lowell M. Merriman, | *South Whitley.* |
| Ralph L. Miller, | *Medora.* |
| Albert D. Monninger, | *Indianapolis.* |
| Perry M. Murphy, | *Whitcomb.* |
| Roy W. Murray, | *Owensville.* |
| Otto W. Painter, | *Middleton.* |
| Gustavus A. Petersdorf, | *LaFayette.* |
| Eugene S. Priest, | *Brick Chapel.* |
| Fred. Rankert, | *Mishawaka.* |
| Richard S. Robinson, | *LaFayette.* |
| Howard L. Rous, | *Jeffersonville.* |
| Conrad Schroeder, Jr., | *Shelbyville.* |

| | |
|---|---|
| Charles E. Smock, | *Union City.* |
| Oliver W. Stephenson, | *Livonia.* |
| Frederick A. Stokes, | *Rockville.* |
| Christian E. Stoner, | *Greencastle.* |
| Ernest Stoner, | *Greencastle.* |
| George H. Stotler, | *Indianapolis.* |
| William M. Ticen, | *Colfax.* |
| Edward C. Tinsley, | *Indianapolis.* |
| Alva I. Ulrich, | *Three Rivers, Mich.* |
| Nelson G. Walterhouse, | *Muncie.* |
| Walter Wampler, | *Gosport.* |
| Richard A. Williams, | *Greensburg.* |
| William D. Zimmerman, | *Peterson.* |
| Total, 64. | |

## SPECIAL STUDENTS.

| | |
|---|---|
| George B. Sloan, | *Indianapolis.* |

## SUMMARY.

| | |
|---|---|
| Second year | 23 |
| First year | 64 |
| Special | 1 |
| Total | 88 |

## ALUMNI.

### WITH THE DEGREE OF DOCTOR OF PHARMACY.

JOHN N. HURTY, M. D., pharmacist and analytical chemist, 102 North Pennsylvania Street, Indianapolis, Ind., Professor of Chemistry and Metallurgy in Indiana Dental College; also Lecturer on Hygiene in Indiana Medical College.

GEORGE W. SLOAN, M. D., pharmacist, 22 West Washington Street, Indianapolis, Ind., President of the American Pharmaceutical Association, 1879–1880. Lecturer on Pharmacy in Indiana Medical College.

JOSEPH R. PERRY, pharmacist, 149 East Washington Street, Indianapolis, Ind. Editor of Indiana Pharmacist; also Lecturer on Pharmacy in Eclectic College of Physicians and Surgeons.

### WITH THE DEGREE OF GRADUATE IN PHARMACY.

### 1886.

ERNEST G. EBERHARDT, analytical chemist for Eli Lilly & Co., Indianapolis, Ind.

MANUEL JAY, physician, 757 South Michigan Street, South Bend, Ind.

JOHN KENNEDY, in charge of prescription department of R. G. Moore, Vincennes, Ind.

EDWIN J. MOWRY, pharmacist, Columbia City, Ind.

LOUIS H. SCHULMEYER, chemist for Daniel Stewart, wholesale druggist, Indianapolis. Address, 725 North Tennessee Street.

BERT D. WESTENFELDER, chemist to the American Oak Leather Co., Cincinnati, O. Address, 247½ Clinton Street.

EMORY J. YEAGER, prescription clerk, with Dr. A. A. Wells, LaFayette, Ind.

## 1887.

Millard Caldwell, pharmacist, in the firm of Krauss & Caldwell, Hartford City, Ind.

William H. Dickinson, pharmacist, No. 626 West Lake Street, Chicago.

Charles L. Hackett, pharmacist, in the firm of John Hackett & Son, Roanoke, Ind.

William M. Ross, pharmacist, cor. Wabasha and Tenth, St. Paul, Minn.

Albert W. Shoup, studying medicine at Louisville Medical College, Louisville, Ky.

## 1888.

Peter H. Fetters, pharmacist, No. 155 Prospect Street, Indianapolis, Ind.

Samuel Kennedy, physician, Shelbyville, Ind.

George C. Morrison, pharmacist, South East Street, Indianapolis, Ind.

William H. Vawter, pharmacist, in the firm of Warner & Vawter, corner Main and Sixth Streets, LaFayette, Ind.

## 1889.

Aden L. Cavins, pharmacist, Bloomfield, Ind.

Luther J. Hord, Shelbyville, Ind.

Merit Post, pharmacist, in the firm of C. P. Post & Son, Lowell, Ind.

Charles W. Shafer, pharmacist, Morocco, Ind.

George Spitzer, Lecturer on Operative Pharmacy, Purdue University, LaFayette, Ind.

Cortice M. Warner, pharmacist, in the firm of Warner & Vawter, corner Sixth and Main Streets, LaFayette, Ind.

Don Carlton Whitehead, pharmacist, Jerry City, Ohio.

## 1890.

Robert W. Allen, pharmacist, Alexandria, Ind.

Elden Beasley, pharmacist, Union, Ind.

Moses T. Boggs, prescription clerk, with Johnson Bros., Logansport, Ind.

Bert Critz, prescription clerk, with S. M. Smith, Osgood, Ind.

John E. Dunlavy, prescription clerk at Allen's Drug Store, Greencastle, Ind.

William E. Easterday, prescription clerk at Some's Pharmacy, N. E. corner Sixth and Ohio Streets, Terre Haute, Ind.

Joseph L. Feibleman, travelling salesman, with Daniel Stewart, Indianapolis. Address, 226 East New York Street.

Henry H. Harris, prescription clerk, with C. H. Shad & Co., corner Washington and Noble Streets, Indianapolis, Ind.

George W. Lacey, Chicago, Ill. (?)

Alvin H. Leeser, prescription clerk, with Frank Falkenberg, corner West Chicago Avenue and Roley Street, Chicago, Ill.

Henry W. Meinzen, pharmacist, corner Chute and Maumee Avenue, Fort Wayne, Indiana.

Frank Riggs, pharmacist, in firm of Riggs & Plogsterth, Marion, Ind.

Frank E. Shattuck, in charge of laboratory of the Buntin Drug Co., Terre Haute, Ind.

Marion A. Stout, prescription clerk, with Charles C. Deam, Bluffton, Ind.

Charles W. Watkins, prescription clerk, with S. Mühl, corner 13th and Illinois Streets, Indianapolis, Ind.

John M. Westfall, prescription clerk, with C. C. Pierney, corner 6th and Chestnut Streets, St. Louis, Mo.

## 1891.

Joseph H. Anderson, pharmacist, in the firm of Anderson & Werkman, Hull, Iowa.

Jonathan M. Bauer, in charge of H. H. Flandermeyer's pharmacy, No. 839 Superior Street, Cleveland, Ohio.

Isaac D. Bonnett, pharmacist, in the firm of I. D. Bonnett & Co., Shreve, Ohio.

Paul D. Brown, prescription clerk, with E. Haworth, LaFayette, Ind.

Charles C. Crampton, attending Louisville Medical College, Louisville, Ky.

August Diehl, pharmacist, Union Street, LaFayette, Ind.

William S. Green, prescription clerk, with A. Angell, Denver, Col.

William J. Hart, formerly with H. W. Kempt, Evansville, Ind.

Alvin L. Hills, Pittsburg, Texas (?).

James W. Kyle, prescription clerk, in charge of Dr. Marr's pharmacy, No. 4714 State Street, Chicago, Ill.

Joseph O. McCarty, Null's Mills, Ind.

John S. Max, formerly with J. A. Campbell, Hartville, Mo., now studying medicine.

Oscar A. Means, pharmacist, No. 1228 Broadway, Logansport, Ind.

George C. Metzger, deceased.

Louis W. Plogsterth, pharmacist, in the firm of Biggs & Plogsterth, Marion, Ind.

Fred. P. Pyke, prescription clerk, with Thomas Thornburg, No. 190 Fort Wayne Avenue, Indianapolis, Ind.

Wildey F. Reynolds, prescription clerk, with Charles W. Eichrodt, corner of First and West Streets, Indianapolis, Ind.

David L. Rife, pharmacist, in the firm of Cotton & Rife, Crawfordsville, Ind.

Harry E. Sharrer, prescription clerk, with M. M. Murphy, Delphi, Ind.

James R. Spivey, pharmacist, Oxford, Ohio.

Frank O. Stabler, Athens, Col.

Julius W. Sturmer, Professor of Pharmacy, Purdue University, LaFayette, Ind.

## 1892.

Joseph D. Bartlett, prescription clerk, with David Hilt, LaFayette, Ind.

Frank M. Best, pharmacist, in the firm of Best Bros., corner College Avenue and Ninth Street, Indianapolis, Ind.

John Bright, Treaty, Ind.

Albert H. Caulkins, prescription clerk, with W. H. Snoddy, LaFayette, Ind.

Frank Cavins, Bloomfield, Ind.

Miss Love E. Crampton, Delphi, Ind.

George E. Cravens, prescription clerk, with Aden Cavins, Bloomfield, Ind.

James F. Fiske, prescription clerk, with C. Dickenson, Lead, South Dakota.

Nathan K. Garhart, analytical chemist, with Dr. John N. Hurty, Indianapolis, Ind.

Edward L. Green, prescription clerk, with C. A. Spencer, No. 1020 Fifteenth Street, Denver, Col.

B. Franklin Griffith, prescription clerk, with Frech & Dumbauld, Huntington, Ind.

Miss Nina B. Hart, DeForest, Ind.

Benjamin M. Hoak, instructor in Pharmacognosy, Purdue University, LaFayette, Ind.

Edward Kadel, in charge of laboratory of Cook, Bell & Black, Terre Haute, Ind.

John W. McMahan, traveling salesman, with W. H. Armstrong & Co., Indianapolis, Ind.

John H. Miller, dispensing pharmacist at Eastern Indiana Hospital for Insane, Richmond, Ind.

John Roscoe Mutz, prescription clerk, with Mutz & Lynch, Edinburg, Ind.

Emil Reyer, manufacturing chemist for Indianapolis Drug Co., Indianapolis, Ind.

GEORGE B. SLOAN, prescription clerk, with Dr. George W. Sloan, Indianapolis, Ind.

FRANK M. THORN, prescription clerk, with R. M. Barber & Co., No. 460 63d Street, Chicago, Ill.

THOMAS A. WEST, prescription clerk, with Cheney & Hutchinson, Rockville, Ind.

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